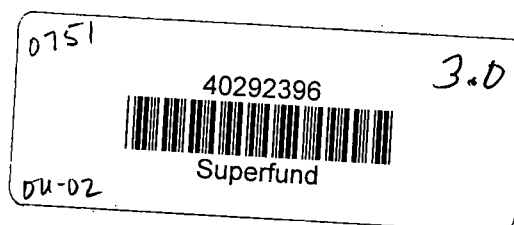


SUMMARY OF OU2 MONITORING

May 1999

**Syntex Agribusiness, Inc.
Verona Remediation Site**

September 27, 1999



SUMMARY OF OU2 MONITORING
SYNTEX AGRIBUSINESS, INC.
VERONA REMEDIATION SITE

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	MONITOR DATES	1
1.2	CONTRACTOR INFORMATION	1
2	QUALITY ASSURANCE / QUALITY CONTROL	1

LIST OF TABLES

TABLE 1	VOLATILE ORGANIC COMPOUNDS
TABLE 2	SEMIVOLATILE ORGANIC COMPOUNDS
TABLE 3	PESTICIDES AND PCBs
TABLE 4	2,3,7,8 – TCDD
TABLE 5	METALS, ANIONS, TOC, AND PHENOLS

1 INTRODUCTION

The following information summarizes the groundwater monitoring activities that were completed by Syntex Agribusiness, Inc., at the Verona, Missouri Remediation Site in accordance with the requirements specified in the Order on Consent for Operable Unit Number Two (OU2). The following monitoring wells and Spring River locations were sampled in this sampling event:

IS-6	MW-07	MW-15B	MW-22
MW-04	MW-09	MW-16	North River
MW-05	MW-15	MW-16B	South River
MW-06	MW-15A	MW-21	

1.1 MONITOR DATES

The quarterly groundwater monitoring activities for OU2 were initiated on May 13, 1999 and were completed on May 21, 1999. All groundwater monitoring activities were completed in accordance with the requirements specified in the "OU2 Implementation Plan - Sampling and Analysis Plan."

1.2 CONTRACTOR INFORMATION

GROUNDWATER MONITORING - SECOR Environmental Engineering
1340 West Battlefield, Suite 103
Springfield, MO 65708

TECHNICIANS - Ben Franka, Lori Young

LABORATORY ANALYSIS - Southwest Laboratory of Oklahoma, Inc. (primary)
1700 West Albany
Broken Arrow, OK 74102

American Technical & Analytical Services, Inc. (split)
875 Fee Fee Road
Maryland Heights, MO 63043

2 QUALITY ASSURANCE/QUALITY CONTROL

The analytical testing was completed in accordance with the procedures specified in the "OU2 Implementation Plan - Quality Assurance Plan."

TABLE 1

Summary of OU2 Monitoring Data Volatile Organic Compounds

METHOD: 8260

Summary of OU2 Monitoring Data Volatile Organic Compounds DuCoa Facility - Verona, Missouri

Date: 09/27/99

CONSTITUENT	SITE	IS-6	MW-4	MW-5	MW-6	MW-7	MW-9	MW-9
(Units in ug/l)	SAMPLE ID	SEL-8509	SEL-8512	SEL-8519	SEL-8521	SEL-8513	SEL-8520	SEL-8522
	DATE SAMPLED	5/13/99	5/14/99	5/18/99	5/19/99	5/14/99	5/19/99	5/19/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Split 1 Set 1
Acetone		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene		5 U	40	11	130	4 E	2 E	5 U
Methylene chloride		5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dioxane		500 U	500 U	500 U	500 U	500 U	500 U	--
Ethylbenzene		5 U	5 U	5 U	6	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane		5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene		5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene		5 U	10	5 U	14	5 U	5 U	5 U
Toluene		5 U	5 U	5 U	1 E	5 U	5 U	5 U
Xylene (total)		5 U	5 U	5 U	11	5 U	5 U	5 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

J = Estimated value: concentration is above limit of quantitation.

= Constituent in more than one test method, highest result reported.

-- = Not analyzed.

U = Not detected above quantitation limit.

B = Analyte is detected in blank as well as sample.

SAMPLING EVENT: GW-0599 (5/13/99 to 5/21/99)

SAMPLE TYPE: Water

METHOD: 8260

Table 1
Summary of OU2 Monitoring Data
Volatile Organic Compounds
DuCoa Facility - Verona, Missouri

Page: 1B of 1C

Date: 09/27/99

CONSTITUENT	SITE	MW-15	MW-15 A	MW-15 B	MW-16	MW-16 Dup	MW-16 B	MW-21
(Units in ug/l)	SAMPLE ID	SEL-8514	SEL-8515	SEL-8518	SEL-8517	SEL-8523	SEL-8516	SEL-8510
	DATE SAMPLED	5/14/99	5/14/99	5/18/99	5/18/99	5/18/99	5/18/99	5/13/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Duplicate 1 Set 1	Primary set 1	Primary Set 1
Acetone		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene		5 U	5 U	17	5 U	5 U	5 U	5 U
Methylene chloride		5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dioxane		500 U	500 U	500 U	500 U	500 U	500 U	500 U
Ethylbenzene		5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane		5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene		5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene		5 U	5 U	2 E	5 U	5 U	5 U	5 U
Toluene		5 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylene (total)		5 U	5 U	5 U	5 U	5 U	5 U	5 U

METHOD: 8260

Table 1
Summary of OU2 Monitoring Data
Volatile Organic Compounds
DuCoa Facility - Verona, Missouri

Date: 09/27/99

[illegible]

TABLE 2

Summary of OU2 Monitoring Data Semivolatile Organic Compounds

METHOD: 8270

Summary of OU2 Monitoring Data Semivolatile Organic Compounds DuCoa Facility - Verona, Missouri

Date: 09/27/99

[illegible]

METHOD: 8270

Summary of OU2 Monitoring Data
Semivolatile Organic Compounds
DuCoa Facility - Verona, Missouri

Date: 09/27/99

CONSTITUENT	SITE	MW-7	MW-9	MW-9	MW-15	MW-15	MW-15 A	MW-15 A
(Units in ug/l)	SAMPLE ID	SEL-8513	SEL-8520	SEL-8522	SEL-8514	SEL-8514	SEL-8515	SEL-8515
	DATE SAMPLED	5/14/99	5/19/99	5/19/99	5/14/99	5/14/99	5/14/99	5/14/99
	RESULT TYPE	Primary Set 2	Primary Set 1	Splic 1 Set 1	Primary Set 1	Primary Set 2	Primary Set 1	Primary Set 2
Bis(2-ethylhexyl)phthalate		10 U	2 EB	10 U	57 B	10 U	4 EB	10 U
1,3-Dichlorobenzene		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorophene		200 U	200 U	---	200 U	200 U	200 U	200 U
Naphthalene		10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene		10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene		10 U	10 U	---	10 U	10 U	10 U	10 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value; concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value; concentration is above limit of quantitation.

--- = Not analyzed.

B = Analyte is detected in blank as well as sample.

METHOD: 8270

Summary of OU2 Monitoring Data Semivolatile Organic Compounds DuCoa Facility - Verona, Missouri

Date: 09/27/99

CONSTITUENT	SITE	MW-15 B	MW-16	MW-16 Dup	MW-16 B	MW-21	MW-22
(Units in ug/l)	SAMPLE ID	SEL-8518	SEL-8517	SEL-8523	SEL-8516	SEL-8510	SEL-8511
	DATE SAMPLED	5/18/99	5/18/99	5/18/99	5/18/99	5/13/99	5/13/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Duplicate 1 Set 1	Primary Set 1	Primary Set 1	Primary Set 1
Bis(2-ethylhexyl)phthalate		6 EB	2 EB	5 EB	2 EB	5 EB	3 EB
1,3-Dichlorobenzene		10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorophene		200 U	200 U	200 U	200 U	200 U	200 U
Naphthalene		10 U	10 U	10 U	10 U	4 E	10 U
1,2,4-Trichlorobenzene		10 U	10 U	10 U	10 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene		10 U	10 U	10 U	10 U	10 U	10 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value: concentration is above limit of quantitation.

--- = Not analyzed.

B = Analyte is detected in blank as well as sample.

METHOD: 8270

Summary of OU2 Monitoring Data

Semivolatile Organic Compounds

DuCoa Facility - Verona, Missouri

Date: 09/27/99

[illegible]

TABLE 3

**Summary of OU2 Monitoring Data
Pesticides and PCBs**

SAMPLING EVENT: GW-0599 (5/13/99 to 5/21/99)

SAMPLE TYPE: Water

METHOD: 8080

Table 3
Summary of OU2 Monitoring Data
Pesticides and PCBs
DuCoa Facility - Verona, Missouri

Page: 3A of 3C

Date: 09/27/99

CONSTITUENT	SITE	IS-6	MW-4	MW-5	MW-6	MW-7	MW-9	MW-9
(Units in ug/l)	SAMPLE ID	SEL-8509	SEL-8512	SEL-8519	SEL-8521	SEL-8513	SEL-8520	SEL-8522
	DATE SAMPLED	5/13/99	5/14/99	5/18/99	5/19/99	5/14/99	5/19/99	5/19/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Spot 1 Set 1
Heptachlor		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.02 U
Heptachlor epoxide		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.162
Aroclor 1242		1 U	1 U	1 U	1 U	1 U	1 U	1 U

METHOD: 8080

Summary of OU2 Monitoring Data
Pesticides and PCBs
DuCoa Facility - Verona, Missouri

Date: 09/27/99

[illegible]

METHOD: 8080

Summary of OU2 Monitoring Data
Pesticides and PCBs
DuCoa Facility - Verona, Missouri

Date: 09/27/99

CONSTITUENT	SITE	MW-22	N River	S River
(Units in ug/l)	SAMPLE ID	SEL-8511	SEL-8533	SEL-8534
	DATE SAMPLED	5/13/99	5/20/99	5/20/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1
Heptachlor		0.04 U	0.04 U	0.04 U
Heptachlor epoxide		0.04 U	0.04 U	0.04 U
Aroclor 1242		1 U	1 U	1 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value: concentration is above limit of quantitation.

--- = Not analyzed.

B = Analyte is detected in blank as well as sample.

TABLE 4

**Summary of OU2 Monitoring Data
2,3,7,8 - TCDD**

METHOD: 8280

DuCoa Facility - Verona, Missouri

Date: 09/27/99

CONSTITUENT	SITE	IS-6	MW-4	MW-5	MW-6	MW-7	MW-9	MW-9
(Units in ug/l)	SAMPLE ID	SEL-8509	SEL-8512	SEL-8519	SEL-8521	SEL-8513	SEL-8520	SEL-8522
	DATE SAMPLED	5/13/99	5/14/99	5/18/99	5/19/99	5/14/99	5/19/99	5/19/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Split 1 Set 1
2,3,7,8-TCDD		0.090 U	0.13 U	0.11 U	0.090 U	0.070 U	0.11 U	0.001031 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value: concentration is above limit of quantitation.

--- = Not analyzed.

B = Analyte is detected in blank as well as sample.

METHOD: 8280

Summary of OU2 Monitoring Data
2,3,7,8 - TCDD
DuCoa Facility - Verona, Missouri

Date: 09/27/99

CONSTITUENT (Units in ug/l)	SITE	MW-15	MW-15 A	MW-15 B	MW-16	MW-16 Dup	MW-16 B	MW-21
	SAMPLE ID	SEL-8514	SEL-8515	SEL-8518	SEL-8517	SEL-8523	SEL-8516	SEL-8510
	DATE SAMPLED	5/14/99	5/14/99	5/18/99	5/18/99	5/18/99	5/18/99	5/13/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Duplicate 1 Set 1	Primary Set 1	Primary Set 1
2,3,7,8-TCDD		0.090 U	0.080 U	0.090 U	0.080 U	0.011 U	0.10 U	0.090 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value: concentration is above limit of quantitation.

--- = Not analyzed.

B = Analyte is detected in blank as well as sample.

METHOD: 8280

DuCoa Facility - Verona, Missouri

Date: 09/27/99

CONSTITUENT	SITE	MW-22	N River	S River
(Units in ug/l)	SAMPLE ID	SBL-8511	SEL-8533	SEL-8534
	DATE SAMPLED	5/13/99	5/20/99	5/20/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1
2,3,7,8-TCDD		0.080 U	0.080 U	0.10 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value: concentration is above limit of quantitation.

--- = Not analyzed.

B = Analyte is detected in blank as well as sample.

TABLE 5

**Summary of OU2 Monitoring Data
Metals, Anions, TOC and Phenols**

SAMPLING EVENT: GW-0599 (5/13/99 to 5/21/99)

SAMPLE TYPE: Water

METHOD: Metals: 6010B; 7041; 7060; 7421; 7740

Anions: 300.0 TOC: 9060

Phenols: 9065 Nitrate-Nitrite: 353.1

Table 5

Summary of OU2 Monitoring Data

Metals, Anions, TOC and Phenols

DuCoa Facility - Verona, Missouri

Page: 5A of 5C

Date: 09/27/99

CONSTITUENT	SITE	IS-6	MW-4	MW-5	MW-6	MW-7	MW-9	MW-9
	SAMPLE ID	SEL-8509	SEL-8512	SEL-8519	SEL-8521	SEL-8513	SEL-8520	SEL-8522
(Units in ug/l)	DATE SAMPLED	5/13/99	5/14/99	5/18/99	5/19/99	5/14/99	5/19/99	5/19/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Split 1 Set 1
Antimony		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	60 U
Arsenic		122	91.6	15.4	41.3	41.5	99.8	46
Barium		3470	1680	1840	1640	965	636	500
Cadmium		9.2	11.2	5.0 U	5.6	3.0 U	3.0 U	5.0 U
Calcium		69400	64000	77100	75600	82400	34000	37200
Chromium		353	304	27.4	152	20.2	47	6
Iron		634000	285000	35500	146000	31700	57400	33400
Lead		107	122	8.5	161	5	20.9	4
Magnesium		16800	22000	8010	13400	8940	3970	2820
Manganese		14100	9060	9440	20000	4210	3330	2380
Selenium		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	20 U
Sodium		7580	35000	25960	28000	17400	21100	20900
Chloride		9100	21000	122000	150000	74100	22800	23200
Sulfate		15400	5400	5.9	400	2400	850	850
Nitrate		600	100 U	100 U	100 U	100 U	100 U	83
TOC		2300	3400	4.4	7800	4700	3400	3900
Phenols		100	50 U	50 U	50 U	50 U	50 U	50 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value: concentration is above limit of quantitation.

... = Not analyzed.

B = Analyte is detected in blank as well as sample.

SAMPLING EVENT: GW-0599 (5/13/99 to 5/21/99)

SAMPLE TYPE: Water

METHOD: Metals: 6010B; 7041; 7060; 7421; 7740

Anions: 300.0 TOC: 9060

Phenols: 9065 Nitrate-Nitrite: 353.1

Table 5

Summary of OU2 Monitoring Data

Metals, Anions, TOC and Phenols

DuCoa Facility - Verona, Missouri

Page: 5B of 5C

Date: 09/27/99

CONSTITUENT	SITE	MW-15	MW-15 A	MW-15 B	MW-16	MW-16 Dup	MW-16 B	MW-21
	SAMPLE ID	SEL-8514	SEL-8515	SEL-8518	SEL-8517	SEL-8523	SEL-8516	SEL-8510
(Units in ug/l)	DATE SAMPLED	5/14/99	5/14/99	5/18/99	5/18/99	5/18/99	5/18/99	5/13/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1	Primary Set 1	Duplicate 1 Set 1	Primary Set 1	Primary Set 1
Antimony		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Arsenic		18.1	14.5	20.9	8.4	6.2	4.0 U	24.3
Barium		527	744	804	147	88.9	42.1	1110
Cadmium		3.0 U	3.0 U	3.0 U	3.6	3.0 U	3.0 U	9.4
Calcium		474000	61500	70000	618000	114000	58800	240000
Chromium		118	78.5	12.4	41	30.3	15.7	31.7
Iron		50400	40100	18400	15500	9900	2310	147000
Lead		90	22.9	3.7	63.2	36.7	3.2	12.7
Magnesium		12600	8200	7800	31200	23400	6140	14800
Manganese		5510	6470	3650	4120	851	303	13000
Selenium		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Sodium		6220	12000	20900	7750	7150	7590	11600
Chloride		19600	13200	80100	1400	1400	2500	22700
Sulfate		8200	7000	1900	8200	8200	4900	7400
Nitrate		200	100 U	100 U	100 U	100 U	300	100 U
TOC		1500	2500	4100	2300	3800	1000 U	1600
Phenols		50 U	50 U	50 U	50 U	50 U	50 U	50 U

Notes:

Values represent total concentrations unless noted.

E = Estimated value: concentration is below limit of quantitation.

= Constituent in more than one test method, highest result reported.

U = Not detected above quantitation limit.

J = Estimated value: concentration is above limit of quantitation.

--- = Not analyzed.

B = Analyte is detected in blank as well as sample.

SAMPLING EVENT: GW-0599 (5/13/99 to 5/21/99)

SAMPLE TYPE: Water

METHOD: Metals: 6010B; 7041; 7060; 7421; 7740

Anions: 300.0 TOC: 9060

Phenols: 9065 Nitrate-Nitrite: 353.1

Table 5

Summary of OU2 Monitoring Data

Metals, Anions, TOC and Phenols

DuCoa Facility - Verona, Missouri

Page: 5C of 5C

Date: 09/27/99

CONSTITUENT	SITE	MW-22	N River	S River
	SAMPLE ID	SEL-8511	SEL-8533	SEL-8534
(Units in µg/L)	DATE SAMPLED	5/13/99	5/20/99	5/20/99
	RESULT TYPE	Primary Set 1	Primary Set 1	Primary Set 1
Antimony		4.0 U	4.0 U	4.0 U
Arsenic		5.5	4.0 U	4.0 U
Barium		110	55.1	51.8
Cadmium		3.0 U	3.0 U	3.0 U
Calcium		60200	53100	52500
Chromium		1060	6.0 U	5.0 U
Iron		10900	203	106
Lead		8	3.0 U	3.0 U
Magnesium		3220	2320	1980
Manganese		1260	28	103
Selenium		4.0 U	4.0 U	4.0 U
Sodium		8830	4590	4190
Chloride		17300	7100	7900
Sulfate		4700	3500	3700
Nitrate		300	3000	2800
TOC		1500	1100	1100
Phenols		50 U	50 U	50 U
Notes:				
Values represent total concentrations unless noted.				
E = Estimated value: concentration is below limit of quantitation.				
# = Constituent in more than one test method, highest result reported.				
U = Not detected above quantitation limit.				
B = Analyte is detected in blank as well as sample.				
J = Estimated value: concentration is above limit of quantitation.				
--- = Not analyzed.				